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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/643,686	08/24/2000	Gerald Quapil	31833-150836 (RK)	2565

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EXAMINER

PADMANABHAN, KARTIC

ART UNIT	PAPER NUMBER
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1641

10

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/643,686

Applicant(s)

QUAPIL ET AL.

Examiner

Kartic Padmanabhan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-19 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-19, 22, 23 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 2-19 and 22-27 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/12/03 has been entered.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-19, 22-23, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lekkala et al. (WO 95/22754) in view of Babson et al. (US Pat. 5,885,530).

Lekkala et al. teach a device for carrying out analysis, comprising an analysis well for receiving the substance to be analyzed, a light source (5), and a detector (6). The bottom of the reaction space is coated with a layer of material that can generate an SPR signal. The bottom part of the analysis well is transparent to light. The device also comprises a prism boundary surfaces for the emerging light, as well as for total reflection. The light source is directed through the prism towards the reaction space, wherein the detector is arranged such that it receives light from the prism (abstract). The well of the reference has side walls at angles of less than 90 degrees, as seen in the Figures. Further, since the vessel is in the form of a well, it is inherent from the figures that it is a hollow-cylindrical shape with cylindrical bases. The wells of the reference may be in the form of several wells arranged in a row or matrix. The wells can also be arranged in succession in a strip made of plastic in which there are several adjacent wells. These strips can be placed side by side to form the structure of a microtiter plate, such that the strips of wells can be inserted into a housing that holds all the strips to create a microtiter plate

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structure. The bottoms of the strips can have the shape of any of the prisms (page 5, lines 9-21). The well may specifically be made of polystyrene (page 2, lines 24-25). The measurement of the reference is performed such that a polarized light beam is incident through the prism, and light is totally reflected back into the prism at the boundary surface (page 3, lines 12-35). The light source of the reference may be a laser or LED. The device of the reference further comprises collimating optics and focusing optics (page 4, lines 26-36). When strips of wells are used, the device can comprise a row of light sources and a two-dimensional detector of several detectors as the CCD detector (page 6, lines 10-17). The light must be polarized, such that if the light source does not have its own polarizer, one can be placed between the light source and the prism (page 6, lines 25-28). The well plates and strips of the reference can be fabricated by spray molding using plastic material. Further, instead of assembling separate strips, the plate can be made by molding from a single piece (page 7, lines 3-12). However, the reference does not teach a common receiver.

Babson et al. teach an automated immunoassay analyzer comprising a plurality of reaction tubes in which assays can be performed. The detector (receiver) of the device is a photomultiplier tube that receives the signal from all the reaction tubes.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to use the photomultiplier tube of Babson et al. with the device of Lekkala et al. because photomultipliers and CCD are both commonly used as detectors in optical immunoassays. Further, the use of one central receiver, as opposed to multiple receivers, has the advantage of being more cost-effective and convenient. Further, the use of one receiver eliminates systemic variation between receivers that may distort assay results. In addition, it has

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been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184. As applied to this case, the omission of multiple receivers would have been obvious because the use of a single common receiver would still perform the same function of receiving the signal, and one of skill in the art would have known how to adapt such a receiver to receive signals from multiple vessels.

Response to Arguments

7. Applicant's arguments with respect to claims 2-19, 22-23, and 27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Claims 2-19, 22-23, and 27 are rejected.

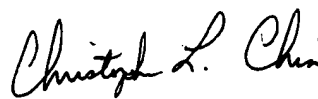
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kartic Padmanabhan whose telephone number is 703-305-0509.

The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 703-305-3399. The fax phone number for the organization where this application or proceeding is assigned is 703-746-5207.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Kartic Padmanabhan
Patent Examiner
Art Unit 1641



CHRISTOPHER L. CHIN
PRIMARY EXAMINER
GROUP 1800-1641